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A SCOTTISH MARINE STATION.

THE ocean has been watched and studied for ages in innumerable aspects—it has been looked at from points of view wide asunder as the poles—it has been sung of by poets, and fished in by fishermen, and sailed over by sailors for thousands of years; but it is still a region of mystery and wonder. There are very many things about the sea which are quite unknown to this day; in fact, the science of marine phenomena is yet in its early youth, only emerging from its infancy. The study of the physical, chemical, and biological conditions of the sea has always been surrounded by a sort of halo of romance, a scientific glamour that almost led men to believe that such research was like fishing—valuable results might be looked for in return for little labour, if the proper opportunity could be found. But the opportunity only occurred at wide intervals, and then the happy few who were fortunate enough to form the scientific staff of such expeditions as that of the *Challenger* were regarded with unmixed envy by the many who were eager to do similar work if they could get the chance.

The wonders discovered by the chief scientific cruises of recent years have greatly increased the interest of the public in the science of the sea, and this public interest has quite lately assumed a tangible form in the foundation of the Scottish Marine Station for Scientific Research at Granton, near Edinburgh. To understand the importance and value of this Station, one must know something of the difficulties presented to any one who wishes to solve some special problem connected with the life which swarms in the waters around our coasts. He must rely on the help of fishermen for collecting specimens; and if he cannot go to the expense of hiring a boat and crew, he requires to content himself with any selection of their 'rubbish' which they may be pleased to make. Should he wish to examine any locality minutely, he must purchase a dredge

and tow-nets, leads and lines, and bottles and boxes to contain the specimens which may be obtained. The difficulty is only half overcome when the work of collecting is over. It is impossible to convey the creatures alive to any distance; and after a few attempts to do so, the naturalist either hires a room in the fishing-village for his work, or gives up the study of marine life altogether; unless he steer a middle course, and content himself with a bare enumeration of species and a description of the external appearance of his specimens.

The individual who is desirous of making chemical or physical observations on the wide sea is in a still more evil case. His apparatus is more costly and more complicated than that of the biologist; it is less easy to manage in a boat not specially adapted for the purpose; and the immediate vicinity of a laboratory is of the first importance. The obstacles, in fact, are so numerous, that observations of this nature have been almost entirely neglected in Great Britain. Now and then, it is true, the fire of scientific enthusiasm burns strong enough in a man to enable him to overcome all difficulties, and to carry on a brilliant research with complete success to a satisfactory conclusion. The work of such men is monumental; but they do not appear many times in a century. The name of one marine chemist is associated with Edinburgh; it is that of Dr John Murray, who in the year 1816 made a series of researches on sea-water collected at Trinity. His work settled a most important point of theoretical chemistry, and it is referred to as of value to this day.

That the progress of marine research was hindered by the trouble and expense of carrying it out—and in honesty it must be said that the latter was always the more powerful deterrent—has long been apparent; and for many years attempts, more or less successful, have been made to remedy this state of affairs. In response to energetic appeals from various learned Societies, government has repeatedly lent gunboats for scientific purposes, and the *Porcupine*, *Lightning*,

Triton, and other ships have done much good work. The culmination of government enterprise was reached in 1873, when the *Challenger* was fitted out for an entirely scientific cruise, and circumnavigated the world investigating the phenomena of the ocean everywhere. How much was accomplished by the three years' voyage can only be realised by those who are familiar with the thirteen large volumes which have been already published describing the collections and observations; but the general reader may form an idea of the magnitude of the work done by reflecting that specialists have been engaged in examining and describing the collections since the return of the ship in 1876, and that this work is still in progress.

Since the return of the *Challenger*, a number of short scientific trips have been made in the vicinity of the British coast by gunboats and hired vessels; and the results of these have been such as to show the extreme advisability of something more permanent being set on foot. The success of the Marine Observatories at Naples and at Marseilles, and of the small movable laboratory kept up for two summers by the university of Aberdeen, proved that Marine Stations were practicable and desirable. It was the consideration of the difficulties in the way of young men who wished to devote themselves to the examination of marine phenomena, but who were unable of themselves to meet the great expense of such work, that led Mr John Murray, Director of the *Challenger* Expedition Commission, to start a Marine Station in the neighbourhood of Edinburgh. A submerged quarry on the shore at Granton, which quarry has been in communication with the sea for nearly thirty years, was selected as the site, and a floating laboratory was formally opened there during the festivities of the Edinburgh University Tercentenary celebration this spring.

The Marine Station has now been open for several months, and the working arrangements have attained a certain degree of completeness. The accommodation which exists at present includes a floating laboratory, 'the Ark,' where zoological, botanical, and chemical work is being carried on by the permanent staff and other investigators. There is also a steam-yacht, the *Medusa*, fitted out with all the arrangements for trawling, dredging, sounding, and taking the other necessary observations. She is manned by an efficient crew, and has the advantage of the services of an engineer who was on the *Challenger* during her scientific cruise. The *Medusa* is a capital seaboard, though, from her small size, when in rough weather, she sometimes tries the sea-going capabilities of the workers. The creatures brought up by the dredge or trawl are kept alive in boxes, the water in which must be changed at intervals, though, when there is a heavy sea and a head-wind, as often happens, this service is performed by the waves, which break over the bows in magnificent spray showers, very beautiful to watch from the dry security of the after-cabin. On arriving at the Ark, the animals are transferred to aquaria or glass dishes, in which a constant current of thoroughly aerated sea-water can be kept up, and in these they live very happily. The larger specimens are usually placed

in wire cages moored to the Ark, where they enjoy all the advantages of life except freedom. For short excursions in the neighbourhood of Granton, there is a good sailing-boat, the *Raven*; and work in the haven in which the Ark lies can also be carried on by the little *Dove*, and the two Norwegian skiffs belonging to the Station, whose names, *Appendicularia* and *Asymptote*, are mystifying to the uninitiated. A row round the quarry at low water reveals the immense richness of the vegetable and animal life which inhabits its waters. There are growths of sponges of different colour, with gracefully interlacing branches like a coral grove, where bright-hued sea-anemones spread their tentacles, and crabs and other crustacea crawl and swim about at their pleasure. And not only are the commoner forms of marine life abundant; rarer species may be found frequently. The beautiful nudibranch mollusc *Eolus* lives in the quarry; and the great fifteen-spined-stickleback builds its nest there, and it has been seen keeping guard over its door while its mate and young remain comfortably within.

The work which is being carried on at the Marine Station at present is divided between four workers. Mr J. T. Cunningham, the naturalist in charge, is making a research into the development of the Teleostean fishes, the great group to which most of our food-fishes, such as the cod, herring, and haddock, belong. Mr J. R. Henderson has commenced to form a collection of all the animal life of the Firth of Forth; while Mr John Rattray is proceeding with a similar collection of the algae or seaweeds, and is also making a detailed study of the diatoms of the district, a piece of work which has never previously been attempted. Mr Hugh Robert Mill has charge of the daily meteorological observations at the Station, and he is working at the chemical and physical study of estuary-water, examining the variations in saltness and in temperature which occur from the fresh water to the open sea, and comparing them at different seasons. The work at the Station is thus seen to be purely scientific; and the results which will ultimately be obtained must be of great practical importance. Any scientific man is welcomed to work at the Station on special problems, without charge, and several gentlemen have taken advantage of the privilege.

It may give a better idea of the working of the various departments if the actual methods employed be shortly described.

Zoological specimens are collected in various ways. The 'trawl' is a wide-meshed net tied up at one end. The net's mouth is attached above to a stout wooden beam that unites two iron runners; the lower side is a strong cable, the ground-rope, which rubs along the sea-bottom. The fish, alarmed by the ground-rope, rise up and are caught in the net, which is carried along so rapidly that escape is impossible. In using the trawl the vessel must steam quickly, and the ground trawled over must be free from rocks. It is only employed for the capture of the larger kinds of fish, such as flounders, haddock, and cod. The 'dredge' is the true naturalist's implement. It is a small-meshed net, closed at one end, and fixed to a rectangular iron frame at the other. When drawn along, it scrapes the

bottom, and brings up everything that it encounters, mud and shells, and all living creatures that are not quick enough to get away. After a run over good ground, when the dredge is hauled up—an operation that is performed on the *Medusa* by a gun-metal wire-rope and a steam winch—and emptied on deck, the profusion of animal life that lies in a struggling heap before one is quite bewildering. There are pectens and oysters, alcyonarians (usually known as 'dead-men's-fingers'), sea-anemones of all sizes and colours, swimming-crabs and spider-crabs and soldier-crabs, whelks and mussels, zoophytes and algae, ascidians (commonly called 'sea-squirts'), sponges, sea-urchins, star-fishes of every kind from the magnificent sun-star, 'rose-jacynth to the finger-tips,' to the common brittle-star and 'five-fingers,' and there are other things more than can be numbered. The dredge and trawl explore the bottom, but are useless for collecting specimens from the surface or intermediate depths; and 'tow-nets'—bags of muslin or canvas sewn on hoops and drawn after the vessel—are employed for this purpose. The creatures caught in the tow-net are usually small; when the contents of the net are placed in a bottle, the water seems full of bright spots darting about in all directions; but under the microscope the specks discover themselves to be beautifully formed crustaceans shining in glassy armour. But the tow-net often catches larger things. An exquisite transparent *medusa* or jelly-fish, its umbrella several inches in diameter, rayed with purple, and carrying a fringe of graceful pendent tentacles, is often brought on board its namesake; and hosts of smaller species of these beautiful creatures are always to be found. It is in the tow-net, too, that the floating ova of fishes, about which there has been so much discussion recently, are caught.

The chemical and physical work done at sea is chiefly the collection of samples of water and the observation of temperature. Water from any moderate depth is collected by lashing a bottle to the sounding-line and lowering it to the proper point; the stopper is then pulled out by a cord and the bottle allowed to fill. The water in the bottle is not changed in its ascent, as the mouth is narrow and it always hangs vertically. When the sea is rough or the depth is great, it is necessary to employ some other means. The 'slip-water-bottle' is convenient for most purposes. It consists of a brass disc covered with india-rubber, and supporting a central column to which the line is attached. This is lowered to the required depth, and then a hollow brass cylinder, open below, but closed above except for a hole that just allows the line to pass, is allowed to slip down the line. The base of the cylinder strikes on the rubber-covered disc, and securely incloses a sample of the water, which is run off by a stop-cock into a bottle after the whole has been hauled on board. The water must always be brought to the laboratory in stoppered bottles, which are entirely filled, and have had the stoppers tied down from the moment of collecting.

The temperature of surface-water is usually taken by drawing a bucketful and placing an ordinary bath-thermometer in it for a few minutes. The precautions of hanging the thermometer in

the centre of the bucket and placing it in the shade must be observed. Temperature at greater depths may be observed in several ways. Three methods have been tried at the Marine Station. The first is by means of a 'cistern-thermometer,' used by the late Sir Robert Christison for ascertaining the temperature of the water in the deep Scottish lochs, which was presented to the Station by Sir Alexander Christison. It consists of a thermometer, the bulb of which is in the centre of a conical copper vessel capable of containing about five pints. When this is lowered into the sea, the water passes through the instrument; but on hauling up, the valves on the upper side are closed, and it is brought on board full of water from the greatest depth it had reached. Experiment shows that the water has not had time to change its temperature in the few minutes that elapse between collecting it and reading the thermometer. A more common instrument, though one not found so suitable for use in shallow water, is the Miller-Casella thermometer, the form chiefly employed on the *Challenger*. It is a self-registering thermometer with a maximum and minimum arm, which register the highest and lowest temperatures met with in each immersion. As the temperature of the sea almost invariably decreases with increase of depth, the lowest temperature is considered to be that of the lowest point reached.

The third form of thermometer has been found the most convenient, and, with some modification, the best for the purposes of the Station. It is Negretti and Zambra's deep-sea thermometer, and its principle is that when the temperature of the water is attained by the thermometer the instrument is made to turn over; the mercury column always breaks at the same point, a contraction near the bulb; the part which had been beyond the bulb remaining in the inverted tube, which is graduated so as to show the temperature at the moment of inversion. Its great advantage is that no subsequent change of temperature affects the instrument until it is set again. Its great defect is that it is difficult to be sure when it has turned over. The simple and ingenious inverting mechanism of Magnaghi is hardly trustworthy; but an improvement has been effected, in consequence of the experience gained at the Scottish Station, which makes the turning of the thermometer, or of any number of thermometers on the same line, a matter of certainty.

The transparency of the water is measured roughly by noting the depth to which a large white disc continues visible when immersed. In the course of a trip from Grangemouth to the Isle of May, the colour of the water was observed to vary from dirty yellow to clear blue-green; and the disc, at first visible only three feet below the surface, was seen at a depth of six feet at Inchgarvie, at fifteen feet off Inchkeith, and at no less than sixty feet a little east of the May. Although the water of the upper reaches of the firth has been rendered muddy by the admixture of river-water, that at the May Island remains beautifully clear.

The routine-work of a biological and chemical laboratory is not of much interest to most people. For every day of collecting, with its fresh sea-air and new sea-sights, there must be

several spent on the Ark in preserving the specimens, pressing plants, dissecting, mounting microscopic objects, observing densities, analysing water, calculating results, and such things; and all this work does not always tend to preserve an odourless atmosphere.

It is not intended that the Marine Station shall long continue of its present small dimensions. The experiment, so far as it has gone, has been so successful that it is now proposed to erect a large house on shore near the quarry, where there will be commodious laboratories, large aquaria, and rooms for the accommodation of the workers. In the meantime, Mr Irvine of Royston has generously given the use of an old manufactory which stands close to the sea beside the quarry. It was formerly used as a tannery, and so contains a number of large water-tight tanks built in the ground. There is a steam pumping-engine; and a very simple modification of the existing pipes will secure the supply of abundance of sea-water. The tanks will be used for experiments on fish-breeding; and the buildings in the works can be employed as laboratories without much alteration.

The Marine Station is intended to be a centre from which branches will extend to other parts of the country. It is in contemplation to erect a permanent marine observatory on the Clyde; and there will also be a portable station, probably a floating laboratory on the plan of the Ark, which can be taken to any part of the coast where it is desirable to make an extended series of observations.

The Granton Station is, with the exception of an annual grant of three hundred pounds from the Scottish Meteorological Society, entirely supported by voluntary subscription; and the heartiness with which the appeals to the public have been responded to by donations of money, apparatus, and material, shows how thoroughly the people of Scotland realise the importance of the work which is being done. The Government Grant Committee of the London Royal Society has made certain allowances to the members of the scientific staff for special researches; but this is not in any sense a government endowment of the Station, the Treasury having definitely refused to give any money for such a purpose. Although government support is an extremely desirable thing, the willing aid of an enlightened public is still better, and the Scottish Marine Station at Granton has this aid.*

BY MEAD AND STREAM.

CHAPTER XXXIX.—THE OTHER SIDE.

It seemed very curious to Madge that she should become the confidant of those two men, with whose fate that of her mother had been so sadly associated. She was thrust into the ungracious position of arbiter between them; she had to decide whether or not the one was false and treacherous, or the other the victim of his own hasty passion and self-deceived in his accusations. She was satisfied that Mr Beecham had spoken

* We will be glad to receive and acknowledge any donations in aid of the Granton Marine Station.—
ED. C. J.

under the conviction of the truth of what he told her; and Mr Hadleigh had just shown her that—if innocent—he could be magnanimous, by his willingness to meet in friendliness one whom he had so long regarded as his implacable foe.

The position involved so much in the result to her and to Philip, that she felt a little bewildered, and almost afraid of what she was about to hear. But she could forgive: that knowledge steadied her.

Mr Hadleigh with his formal courtesy asked her to be seated. He stood at the window, and she could see that the white gloom of the coming snowstorm was reflected on his face.

'May I inquire where you have met Mr Shield?'

She was obliged to reply as she had done to a question put by Philip, which, although different, was to the same purport: 'I may not tell you yet.'

'Philip knows that you have met him?'

'No.' It was most uncomfortable to have to give these evasive answers, which seemed to make her the one who had to give explanations. She observed that Mr Hadleigh's heavy eyebrows involuntarily lifted.

'I ought not to have asked. Pardon me.'

Something in his tone and manner plainly showed that he had penetrated her secret and Mr Beecham's.

'I am sorry not to be able to give you a direct answer.'

'It does not matter,' he said with a slight movement of the hand, as if he were putting the whole subject of her acquaintance with Shield aside. 'I know, from the exclamation you made a little while ago, that he has told you with all his bitterness why he and I have not been friends.'

'There was no bitterness, Mr Hadleigh, but much sadness.'

'I am pleased to hear it, and I will try to give you my explanation in the same spirit. First about George Laurence. I never heard his name until after my marriage; and it is therefore unnecessary to say that when I did hear it, and learned the nature of his former relations with my wife, it was not possible for me to receive him in my house, or for him to regard me as a desirable acquaintance. There were unfortunate consequences following upon this peculiar position; but they may pass. They made my life a hard and solitary one.'

He paused, and as he looked out into the dull atmosphere, the vague stare in his eyes, as if he were seeking something which he could not see, became pathetic. Madge began to understand that expression now, and the meaning of the melancholy, which was concealed from others under a mask of cold reserve. She sympathised, but could say nothing.

'I never spoke to the man, and saw him only a few times. But acquaintances of mine, who thought the news would be agreeable to me, told me of his ways of life and predicted the end, which came quickly. The mistake made by Philip's mother and Mr Shield was in believing that it was not until after her marriage that Laurence neglected his business and took to dissipation. Men who had known him for several years previous to that date informed me that his

habits were little altered after it. Nights spent in billiard-rooms and other places; days wasted on racecourses and his fortune squandered. He attempted to retrieve all by one daring speculation. Success would have enabled him to go on for a longer or shorter time, according to the use he made of the money; failure meant disgrace and a charge of fraud. He failed, and escaped the law by taking poison.

'Are you sure of this?' ejaculated Madge, startled and shocked by this very different version of the sentimental story she had heard.

'I will show you the newspaper report of the inquest, and a copy of the accountant's report to the creditors on what estate was left. They will suffice to satisfy you that there is no error in anything I have said.'

'Why was it that Mr Shield, who was his most intimate friend, knew nothing of this?'

'He must have known something, but not all. His ways were quiet and studious, and what he did see, he did not regard with the eyes of experience. I do not think that Laurence attempted to deceive him; for men who fall into his course of life soon become blind to its evils and consequences; and so, without premeditation, he did deceive him. Mr Shield, being a man as passionate in his friendships as in his hates, would listen to no ill of his friend. But there is one thing more which I have never repeated, and never until now allowed any one over whom I had influence to repeat. You, however, must learn it from the lips of one who witnessed the scene.'

He rang the bell, and Terry the butler appeared. It was one of Mr Terry's strict points of discipline in his kingdom below stairs that without his sanction no one but himself should answer the drawing-room bell. Obeying a motion of the master's hand, he advanced with a portly gravity becoming the dignity of his office.

'You were an attendant in the Cosmos Club about the date of my marriage?' said the master.

'I was, sir, then, and for six months before, and a good while after.'

'You recollect what was said about the marriage a few evenings after it took place?'

'Perfectly, sir, because you told me to write it down, as you thought some day it might be useful to you.'

'The day has come. Tell us what you heard.'

'There was a small dinner-party in the strangers' room, and I had charge of it. The gentlemen were particularly merry, and in fact there was a remarkable quantity of wine used. Your marriage, sir, was mentioned; and Mr Laurence, who was the gayest of the company, although he took less wine than any other gentleman, proposed the health of the happy couple. I recollect his very words, sir. He says: "I was in the swim for the girl myself; but this beggar, Hadleigh, cut me out; that was luck for me, so here's a luck to them;" and the toast was drunk with perfect enthusiasm. Mr Laurence made away with himself some time after; and I heard the gentlemen whisper among themselves, when referring to the sad event, that it was a question of doing that or of doing a spell of penal servitude. That's all, sir.'

The master nodded: Mr Terry bowed and

retired with the portly gravity with which he had entered.

Mr Hadleigh turned to Madge. The butler's story produced the effect desired: she was convinced, for she felt sure that no man who loved could speak so lightly—or speak at all—of the woman he loved in a company of club bacchanalians.

'But why did you not tell this to Mr Shield?' was her reproachful exclamation.

'Because he would not listen to anything I had to say. From the time of the marriage until after the death of Laurence, we never met. Then he came to me, mad with passion, and poured out a volley of abuse. I was patient because he was her brother; and silent because it was as hopeless to expect a man drunk with rage to be reasonable as one drunk with alcohol. In his last words to me he accused me of murder. We have never spoken together since.—Do you think me guilty?'

'I do not believe it,' she replied decisively; 'nor would he have believed it, if what you have told me had been made known to him in time.'

'I am grateful to you,' said Mr Hadleigh, bending his head; 'but I perceive you do not know Mr Shield. Time and solitude alter most men, and they must have had a peculiar effect upon him to have enabled him to make such a deep impression on you. He used to be obstinate to the last degree, and once he had formed an opinion, he held to it in spite of reason.'

'He must be changed indeed, then, Mr Hadleigh. I am sure that when he had had time to think, he would have understood it all but'—

She paused; and his keen eyes rested searchingly on her troubled face.

'I know what you would say, and I see that you have doubted me. Ah well, ah well; it is a pity; but that, too, shall be made clear to you, I trust.'

She looked up again hopefully.

'Oh, if you will do that!' The tone was like that of an appeal.

'It can be done, I think. . . . You have been told that it was I who, in my enmity to Shield, took advantage of his long absence and silence to set abroad the report that he was married. I did not. The story was on the tongue of everybody hereabouts for months, and I, like the rest, believed it. There are only two men who would have said that I spoke the falsehood—the one is the man who invented it; the other is Shield himself.'

'You knew the man?'

'I did.'

'Then why, why did you not denounce him in time?'

'Because I did not know him until after your mother's wedding; and then I thought she would learn the truth only too soon for her peace of mind.'

'How did you discover him, then?'

'The scoundrel revealed himself. He came to me, and insolently told me that, knowing the state of affairs between Shield and me, he thought he would do me a good service. So he had given him a blow which he would not get over in a hurry. I knew something of the man, and at once suspected his meaning. I inquired how he

had struck the blow; and he explained that it was he who had brought about matters so that when Shield came home he found his sweetheart already married to somebody else.

Poor Madge was weeping bitter tears in her heart, but there were none in her eyes: they were full of eagerness and wonder. She was drawing nearer and nearer to the truth, which would enable her to effect the purpose Philip so much desired.

'It is the advantage of my nature,' Mr Hadleigh went on calmly, 'that I can listen to a scoundrel without losing temper. On this occasion, I asked how he knew that Shield had returned. "I have seen him," he said; "and he is cut up enough to please even you. Now, having done this job for you, I expect you to give me something for my trouble."—"How much?"—"A hundred is not too much to ask for the satisfaction of knowing that your bitterest foe has got it hot."—I asked him to write down that he had been the first to report in the village that Austin Shield was married, although at the time he had no authority for the statement.—"That looks like a confession," he said.—"Exactly. I mean it to be one."—After thinking for a moment, the fellow said: "All right; it won't matter to me, for to-morrow I am off to the diggings."

Mr Hadleigh stopped and looked out at the window again, as if the scene he was recalling even now filled him with indignation. He resumed:

'When he had written the memorandum and signed it, I told him my opinion of his villainous transaction, and threatened to have him horse-whipped through the village. At the same time I rang the bell. Although disappointed, "Bah!" said he; "I always thought you were a sneak, without the pluck to give the fellow who hates you a hiding. Shield has the right stuff in him; he gave me the money for telling him that you employed me to tell the lie. That paper you swindled out of me isn't worth a rap. You have no witnesses."—He got out of the room before I could reach him, and escaped pursuit. . . . He was right; the paper was useless to me.'

'Who was the man?'

'Richard Towers. Your aunt will tell you what a scamp he was.'

'But what motive could he have for such a cruel wrong?'

'Unknown to Shield, he was his rival; and it was his own satisfaction he sought in spreading the falsehood, as it was his own interests he served by endeavouring to make capital of it out of both Shield and me by playing upon the unfortunate misunderstandings between us.'

Madge was now calm and thoughtful. She, too, saw what a powerless instrument the villain's memorandum was unless it could be proved that he had written it. Who would not say Mr Hadleigh himself had written it, to escape blame?

'Have you got the memorandum still?' she asked suddenly. 'Will you give it to me?'

'But it is useless, except to satisfy those who trust me that I had no part in the disgraceful affair.'

'It is not quite useless, Mr Hadleigh. There are letters bearing that man's name amongst my grandfather's papers, and Mr Shield can compare the handwriting. That will be enough to assure

him that you are blameless, even if he be so ungenerous as you imagine. Give me the paper.'

A clever thought; and Mr Hadleigh was struck by her quickness in seeing it and the energy with which she took up his cause. He did not know that she was working for Philip.

'You will make a good advocate,' he said with that far-off look in his eyes. 'You shall have the paper. It is in the safe in my room.'

'Thank you, thank you! I will wait here till you send it to me.'

(To be continued.)

THE LARGEST STATUES IN THE WORLD, ANCIENT AND MODERN.

A PIECE of interesting news comes to us from Egypt regarding a discovery recently made in Lower Egypt, by Mr Flinders Petrie, of the fragments of a colossal statue of King Rameses II., which, calculating the height from the fragments which remain, must have stood considerably over one hundred feet in height! The material employed is granite; and the executing of such a work in such a material, and when completed, rearing it into position, must have involved a profound knowledge not only of high art but of engineering skill. Is it possible that the statue could have been cut out whole in one piece? If so, what lever-power did the Egyptians possess to raise such an enormous weight into a perpendicular position?

Certain it is that these ancient builders knew well how to get over, and did get over, prodigious difficulties, as witness their obelisks, and the enormous stones which compose the platform of the magnificent Temple of the Sun at Baalbec. As there is no stone quarry near, how these vast stones could possibly have been conveyed thither in the first place, and then raised to their position, has been an enigma to all modern architects and engineers by whom the temple has been critically examined, and who have freely confessed that, even with all our modern science of steam-cranes, hydraulic jacks, and railways, the transport and raising of such immense cyclopean masses would have undoubtedly presented many serious difficulties, if indeed it could be accomplished at all.

Many of our readers will doubtless remember Mr Poynter's grand picture in the Royal Academy of London, a few years ago, entitled 'Israel in Egypt.' It represented an enormous mass of sculpture mounted on a wheeled truck, dragged along by hundreds of the unfortunate captive Israelites, who are smarting under the whips of their cruel drivers. Mr Poynter had good authority for his 'motive-power' as shown in his picture. So far as we can discover from ancient works or ancient sculptures, the hugest stone masses were transported mainly by force of human muscles, with few mechanical expedients. Levers and rollers seem to have been almost, if not altogether, unknown. The mass was generally placed on a kind of sledge, the ground over which it was to pass lubricated with some oily substance, and the sheer strength of human shoulders was then applied.

The most colossal and by far the most remarkable statue of modern days is that most elaborate and rather eccentric gift of the French

nation to the people of America. Not only is it remarkable for its enormous height and gigantic proportions, but for the very singular and ingenious manner in which it has been constructed, so singular, indeed, that at first sight it is somewhat difficult to comprehend the manner in which it has been built up piece by piece, especially when we mention that the several pieces of copper composing the figure have not been cast. How, then, have they been made? This we will try to explain.

The statue is a female figure of Liberty, having on her head a crown, and holding aloft in her hand a torch. The figure is one hundred and five feet high; but, reckoning the extreme height to the top of the torch, the marvellous altitude of one hundred and thirty-seven feet nine inches is reached. The statue is to be reared on a pedestal of solid granite eighty-three feet high, so that the entire work will rise to the immense height of two hundred and twenty feet nine inches! The artist is M. Bartholdi (the family name, by-the-by, of the great composer best known as 'Mendelssohn').

Having first carefully constructed a model in clay about life-size, this was repeatedly enlarged until the necessary form and size were obtained. The next step was to obtain plaster-casts from the clay, and these casts were then reproduced by clever artists in hard wood. The wooden blocks were then in their turn placed in the hands of copper-smiths, who 'by the hammer alone, it is stated, gave the copper sheets the exact form of the wooden moulds or models; and thus, in this peculiar and laborious manner, the outside copper 'skin' of the statue was formed and, to all outward appearance, completed. But as the copper is only one-eighth of an inch thick, an inner skin is also provided, placed about a foot behind the first, whilst the intermediate space will be filled in with sand, especially at the lower extremities, to give the whole a steadfast foundation.

The stability of the figure will not, however, be left to depend solely on these sheets of thin copper and loose sand; and therefore the interior, from top to bottom, will be strengthened by a framework of girders and supports, by which the whole will be knit together in one firm, compact, unyielding mass. As the sheets of copper and the interior framework are simply secured in the ordinary manner by rivets, when it is desired to remove this metallic mountain, all that has to be done is to un rivet the several plates, take down, and pack on board ship for New York.

It is proposed to place this gigantic 'Liberty' on Bedloe's Island, a very small islet lying about two miles south of the Battery and Castle Garden, the lowest point of the island of Manhattan on which the city of New York is built, so that travellers approaching the city by water on that side will get a fine view of the statue of 'Liberty enlightening the World.'

This mighty work of art, after many years of close and anxious labour, has recently been formally handed over by M. Jules Ferry to the minister of the United States, as a free gift from the people of France to the people of America—a token of love and admiration from the one republic to the other—and measures are

being adopted to take the statue to pieces, with a view to its immediate transmission to New York, in which go-ahead city we shall doubtless soon hear of its final erection.

If Mr Flinders Petrie's discovery of the remains of the gigantic statue of Rameses II. in Lower Egypt, one hundred feet high of solid granite, is the largest statue of antiquity, the 'Liberty' of M. Bartholdi may certainly take rank as the most colossal production of modern days.

A GREENROOM ROMANCE.

IN THREE SCENES.—SCENE I.

MR PERCY MONTMORENCY was seated in front of a looking-glass in his dressing-room at the Pantheon Theatre, habited in the costume of Charles Surface, with the perruquier in attendance. The name of 'Montmorency' was merely a *nom de théâtre* assumed by Harry Stanley when he adopted the somewhat singular resolution of 'fretting and strutting his hour' on the boards of a metropolitan theatre; for Mr Stanley was the only child of his father Colonel Stanley, and consequently heir to that gallant officer's estates in Yorkshire and elsewhere. For the rest, he was three-and-twenty, undeniably good-looking, and endowed with considerable abilities. Having completed the arrangement of the powdered wig, the perruquier withdrew a pace and contemplated the effect with well-simulated admiration. 'Mr Charles Mathews never looked the part better, sir.'

The actor seemed to coincide in the opinion of his flattering attendant, for he rose, and surveyed himself in the glass with admiration, which he made no attempt to conceal.

'A good house, Jackson?'

'Capital, sir. But a little cold. They'll warm up when you go on, sir.'

'Tell the call-boy I want him, Jackson.'

Jackson withdrew; and Montmorency surrendered himself to a mental soliloquy, which assumed somewhat of this form: 'I wonder what my father wishes to see me about? The same old story, I suppose—the folly and wickedness of the step I have taken. Well, of one thing I am certain: I am much better off in my present position, than wedded to that Barbadoes girl, Miss Anstruther, in spite of her money-bags, and whom I have never seen.'

These reflections were put an end to by the entrance of the call-boy.

'If a gentleman giving the name of Colonel Stanley should call, show him in here.'

'He is outside, sir,' replied the boy.

'Show him in at once,' whereupon there entered a small wizen-faced old gentleman, with snow-white hair, and supporting himself on a stick. Montmorency advanced, shook hands with a great show of cordiality, and placed a chair, on which Colonel Stanley slowly seated himself, gazing round the small apartment with an unfeigned expression of curiosity. 'So this is a theatrical dressing-room. You are pretty snug.'

The room certainly deserved the encomium of the old colonel. Paintings in oil and water colours nearly covered the walls; fancy pipes and cigar-boxes and scent-bottles littered the

tables; a case of champagne reposed in one corner, while in the other was a small pile of seltzer water.

The colonel, after indulging in a sigh, proceeded: 'I have called, Harry, before I return to Yorkshire, to make one more appeal to you to give up your present mode of life, settle down as a landed proprietor in your native county, and marry Miss Anstruther.'

It was now the turn of the young man to sigh as he replied: 'Impossible, my dear sir. I am already wedded—to the stage.'

'That may be; but unions can easily be dissolved by a divorce, especially in these days.'

'Not where the contracting parties are so attached to each other as I am to my profession. No, sir. If a man could take a wife on lease, for seven, fourteen, or twenty-one years, the case would be different. But the feeling that my lot in life was fixed—cut and dried, so to speak—the matter won't bear a thought.' The young man felt strongly inclined to indulge in a stage-walk, but the limited area of the apartment forbade such a physical relief. If the reader should consider the remarks of the actor somewhat flippant, it must be borne in mind that no one whose character did not fall under that definition would have acted as Harry Stanley had done.

The old man scowled as he resumed: 'I wonder you can respect yourself, dizened out and painted like a mummer at a pantomime.'

'I am of the same calling as the glory of England, Shakspeare the actor'—

'And poet—you forget that, sir—poet, sir,' sharply retorted the colonel.

'I can assure you, sir, we have men of good family playing very small parts to-night. Trip took honours at Oxford, and Backbite is a Cambridge man.'

'Pray, sir,' replied the colonel, 'if that be the case, why do you all sail under false colours? Why resign the honoured name of Stanley for the Frenchified one of Montmorency?'

The young man bowed as he responded: 'Out of deference to the shallow scruples of the narrow-minded portion of Society.'

'Of which I constitute a member, eh?'

It was in a more conciliatory tone that his son took up the argument. 'Pray, sir, let me ask you a question. Do poets and novelists never adopt a *nom de plume*? Did not Miss Evans style herself "George Eliot;" the late Governor-general of India, "Owen Meredith;" Mademoiselle de la Ramée, "Ouida;" Dickens, "Boz?"'

'That'll do,' interrupted the colonel. 'Then one fine day you will be falling in love, as you call it, with one of these artful and painted sirens, and I shall find myself grandfather to a clown or a pantaloon! For, of course, you will bring up your offspring to the profession, as you call it, as if there were no other profession in the world.'

His son and heir drew himself proudly up as he replied: 'No, sir; I trust I shall never forget that I own the honoured name of Stanley.'

The colonel remained silent for several moments ere he observed: 'I shall never understand why you declined even to see Miss Anstruther.'

'Because the very fact that the lady was labelled my future wife,' replied his son, 'would have caused me to detest her at first sight.'

The old colonel rose from his seat. 'I can see very plainly that I am wasting both your time and my own.—I suppose you will have to do a little "tumbling" presently?'

'I do not make my first entrance till the third act. If you will go in front, you can have my box.' Montmorency rang the bell as he spoke, and when the call-boy appeared, directed him to show his visitor into box A.

The actor was indulging in a sigh of relief, when a head appeared at the half-closed door, and a voice exclaimed: 'May I come in?'

Montmorency bounded from his chair as he seized hold of the extended hand and drew the owner into the room. The new-comer was a young man of about the same age as the actor, and was habited in modern evening dress. Montmorency wrung the hand of his friend Vallance, and forced him into a seat. 'Delighted to see you, Jack! Have a weed and a seltzer?'

In a few seconds the two young men were similarly occupied, and immersed in the consumption of a couple of choice Partagas.

The actor opened the ball. 'You must have met an elderly party in the passage. That was the governor. He is very irate because I won't fall in love by word of command, and marry Miss Anstruther, whom I have never seen.—By-the-bye, you have seen her. What is she like?'

'A lovely girl,' replied Vallance. 'I met her at a ball at Scarborough, soon after her arrival from the West Indies. Faith, Harry, you might do worse.'

'And might do better; eh, Jack? But your ideas of beauty are so opposite to mine, as I remember of old. Now, if you wish to see a perfect vision of loveliness, go in front and see Fonblanque, the Lady Teazle of to-night.'

'You mean Miss Fonblanque, I presume?'

'Exactly. The prefix "Miss" is frequently omitted in theatrical parlance. She is bewitching!'

Vallance shakes his head. 'Have a care, Harry. It would be a pity if you allied yourself with some unknown adventuress, after refusing the rich Miss Anstruther.'

'Well, to be candid, Jack, I am afraid of myself. If I did not constantly call to my mind the fact that I am a Stanley, I should speedily succumb to the charms of the divine Fonblanque, so there is some benefit arising from birth after all.'

'And how long do you mean to pursue this mad freak of yours?' inquired Vallance.

'Till I hear on good authority that the troublesome Miss Anstruther is engaged, or married.'

'And then?'

'Why, then I quit the mimic stage as suddenly as I entered upon it.'

'Meanwhile!' ejaculated Vallance with an incredulous smile.

'Meanwhile,' replied Montmorency loftily, 'I contribute to the "gaiety of nations," as Johnson said of Garrick; and therefore consider myself a far better member of society than a successful general, who has killed so many hundreds of his fellow-mortals; or a lawyer, who has set whole families by the ears in order to

fill his pockets; or a doctor, who, as Tobin says, spends the greater part of his time in writing death-warrants in Latin.

Vallance examined his finger-nails for a few seconds, and after an embarrassing pause, said: 'Harry, I am about to make a confession.'

'I cannot promise you absolution, Jack.'

Vallance proceeded: 'On the memorable night when I first beheld Miss Anstruther at the ball at Scarborough, I fell over head and ears in love with her.'

'You fell in love with her, did you!' repeated Montmorency, in a tone of some annoyance. 'You mean with her banking account. Remember, you are in the confession box.'

'On my honour, no!' replied Vallance. 'As you are aware, I could not afford to marry a penniless girl; but if I were as rich as Rothschild, and Miss Anstruther a pauper, I would marry her to-morrow, if she would have me.—You do not seem to like the idea?'

'Humanity is a strange compound, Jack. It grates upon my sense of propriety that any one else should step into my shoes and wed the woman intended for my wife, yet whom I have vowed never to marry.'

'Why, what a dog in the manger, you are!'

'I would not so much mind if a stranger were to win the heiress; but to know her as your wife, Jack, for the remainder of my existence, to repent probably of my obstinacy—You are not in earnest, Jack?'

'Ah, but I am!' replied Vallance, inwardly murmuring: 'May I be forgiven the lie!'

After a brief mental struggle, Montmorency continued: 'Well, success attend you. You are a lucky fellow to walk off with such a prize; while I—I shall remain a humble stage-player.'

'Remember the peerless Fonblanque, Harry.'

'Ah! you are right. There is beauty, talent, wit, elegance, refinement, all enshrined in the admirable Lady Teazle of to-night. I shall now no longer hold back. To-night I shall know my fate. You have applied the touch-stone.'

The shrill voice of the call-boy now uttered the words 'Charles Surface.'

'There is my call. So adieu for the present. Go in front, and call for me at the end of the show; and we will have a steak at the *Albion* together, and drink to the speedy nuptials of my *bête noire*, Miss Anstruther.'

'With whom?'

'Any one! I care not—no offence, Jack—so I am free.'

Vallance proceeded straight to box A, and having tapped at the door, found himself face to face with Colonel Stanley, who eagerly exclaimed: 'Well, Vallance, has my plan succeeded?'

'I fear not, sir.'

Gave him a second dose the first opportunity. I never knew it fail. If you want to make a man fall in love with a particular woman, tell him she is half engaged, and she will instantly go up twenty per cent. in his estimation. That is how I came to marry his mother. Directly my father told me that Fred Spencer was mad after her, and that she was half inclined to marry him, I rushed to the attack, stormed

the fortress, and carried off the prize! I wasn't going to let that puppy Spencer march off with her. A fellow with not a tithe of my personal recommendations.' Here the colonel paused, as he beheld the countenance of his auditor completely engrossed with the scene; for in the lovely Lady Teazle of the play, Jack Vallance had recognised the West Indian heiress, Emily Anstruther!

SCENE II.

Along one of the tortuous passages leading to the dressing-rooms, a gentleman is conducting a lady, preceded by the dresser. They have evidently come from the audience part of the theatre, as they are both in modern evening dress. Presently the dresser pauses at a door, and after tapping, enters; and returns to invite the lady to invade the sacred precincts of the dressing-room of Miss Fonblanque, the representative of Lady Teazle. After a few whispered words to her escort, the lady accepts the invitation, and in another moment is clasped in the embrace of the actress. 'My dear Julia!'

'My darling Emily!'

Certainly, Lady Teazle fully deserved the rapturous praises of Montmorency. Her lovely dark eyes shone all the brighter from the contrast to the powdered wig; while her splendid figure was displayed to the utmost advantage by means of her handsome brocaded dress.

'And so you recognised me under these tinsel robes, Julia?'

'Your voice is unmistakable; I should have known it anywhere, Emily.—When do you intend to return to your own sphere?'

'First tell me, Julia, how you managed to penetrate these sacred precincts?'

'Oh! my husband, who knows everybody, said he could at once accomplish it, directly I told him you were my old schoolfellow at Barbadoes.—Now, answer me my question, there's a dear!'

'I have found my proper sphere; I am free, popular, and admired. Instead of one admirer, I have hundreds, and the number is increasing nightly. What can woman wish for more?'

'I'll tell you, Emily: a nice husband, and domestic bliss.'

The actress indulged in a scarcely audible sigh. 'That might have been my lot. I mean the domestic bliss part of the affair, if I had not had it dinned into my ears from morning till night that there was only one road to happiness—a union with Mr Stanley, whom I have never seen.'

'You might have liked him very much.'

'Impossible, my dear Julia. The very fact of a man being ticketed like a prize animal at a show, and then his being introduced to you as your certain and future husband, would be quite sufficient to make me detest him.—No, Julia; when I marry, I will myself make the selection, and he must be one who is ignorant that his intended is a rich heiress.'

'That will not be a very easy matter to accomplish, Emily.'

'Listen, Julia, and I'll tell you a secret. There is a young man acting in this company—a Mr Percy Montmorency. He is all I could wish—'

handsome, clever, accomplished, and vastly agreeable.'

'Then you have made your selection?'

'Not so, Julia. His profession renders our union impossible. He may be heir to a peerage; he may be a lawyer's clerk. There is the most delightful mystery as to our antecedents, we play-actors! For instance, who would suppose that I was the rich West Indian heiress, who utilised her amateur theatrical talents, and adopted her present profession? And all in order to escape being pestered into an unwelcome and distasteful marriage. Heigh-ho! I wish I had never seen this captivating fellow.'

Mrs Sydney sighed as she rejoined: 'Ah, Emily, there is the danger of your present mode of life. Before you know where you are, finding yourself over head and ears in love with some handsome fellow, even of whose very name you are ignorant. As to the position in society of his progenitors, that is a point which would require the research of the Society of Antiquaries.'

The actress looked solemnly in the face of her friend, and taking both her hands within her own, replied: 'Julia, there is a fascination in the life of a successful actress, of which you can form no conception. There is the delight of selecting the costume you are to wear on the eventful evening. No trifle to a woman, as you will admit. Then there is the actual pleasure of wearing it, not for the sake of some half-dozen friends, whose envy in consequence is a poor reward, but the object of admiration to hundreds of spectators nightly! Then, instead of monotonous domesticity, executing crewel-work to the accompaniment of the snoring in an armchair of a bored husband, we have the nightly welcome from a thousand pair of hands, and the final call before the curtain amidst an avalanche of flowers! Your name on every tongue, your photo. in every print-shop in London, and your acts and deeds the subject of conversation at every dinner-table in the metropolis!'

Mrs Sydney shook her head with a melancholy smile as the actress finished her oration. 'I am still unconverted, Emily.'

'Quite right, Julia. If we were all actresses, there would be no audiences.'

The inexorable call-boy here put a compulsory finish to the interview between the two friends, with the words 'Lady Teazle.'

SCENE III.

Montmorency was seated in the greenroom at the conclusion of the play, engaged in that absent train of thought known as a brown-study. The more he saw of the fascinating Fonblanque, the more he was captivated. Every hour spent in her society but served to rivet more closely the chain which bound him to her. Should he condescend and make her an offer of his hand, she would naturally be influenced by a profound sense of gratitude, when she discovered that she had married a man of fortune and a Stanley! Whereas, if he had married the rich Miss Anstruther, he would have had her money-bags perpetually thrown in his face. A silver-toned utterance fell on his ears. Looking up, he beheld the subject of his cogitations.

'Allow me to congratulate you, Mr Montmorency, on your Charles Surface this evening. A double call before the curtain, and well deserved.'

'You are pleased to flatter me. The plaudits of the house to-night render any praise on my part of your Lady Teazle unnecessary. I regret that I am fated to lose so charming a compatriot.'

Was it fancy that Montmorency imagined he detected a paler tint on the cheek of the actress, as she replied: 'You are not going to leave us?'

'I fear so.'

'Wherefore?'

'You are the last person to whom I can confide the cause of my sudden departure.'

Lady Teazle cast down her lovely eyes for a brief space, and then, in a voice in which the smallest possible tremolo was perceptible, whispered: 'Are you not happy here?'

'I fear, too much so,' sighed Montmorency. 'I have been living in a fool's paradise lately.'

'How? In what way, Mr Montmorency?'

'I am in love.—You start. You do not believe in an actor, who is always simulating affection, ever falling under the influence of a real and veritable passion.'

'You wrong me; indeed, you do. The artistic nature is, and must be, more acutely sensitive than that possessed by ordinary mortals. Do I know the lady?'

'You see her every day—when you contemplate those charming features in the glass. Yes; it is you, Miss Fonblanque, whom I love, whom I adore!'

How can we describe the flood of sensations which agitated the bosom of the heiress, as she listened to the avowal of affection from the lips of the only man she had ever loved! In low and trembling tones, she managed to reply: 'Mr Montmorency, you are not rehearsing a scene in some new comedy?'

'I was never more serious in my life.'

By this time, the pride of the Anstruthers had come to the assistance of the heiress. 'I grieve very much that I cannot accept your offer. It is impossible.'

'Impossible! Why?'

'That I cannot explain.'

'We are both members of the same profession, and so far equal.'

'Pardon me,' said Lady Teazle. 'You know nothing of my antecedents, and'—

'And you know nothing of mine, you would say. Charming equality! Say, Miss Fonblanque, may I hope?'

It was now the turn of the actress to sigh. 'It would be cruel to raise hopes which can never be realised.'

Montmorency let fall the hand which in his ardour he had seized, and drew himself proudly up. 'That is your fixed answer?'

'It is.'

Montmorency once more took possession of her taper fingers, and raising them to his lips, uttered the word 'Farewell!' and hastily left the greenroom.

The dark melting eyes of the heiress gazed after his retreating figure, and large drops of moisture gathered in them. 'I have half a mind

to call him back,' she mentally whispered.—'No! I must remember I am an Anstruther.'

Sinking on a couch, Lady Teazle felt her brain spinning round; then presently raising her eyes, she beheld—Mr Vallance!

'Have I not the honour of speaking to Miss Anstruther?'

'Since you recognise me, it would be affectation to deny my identity. Mr Vallance, may I ask you to preserve my secret?'

'From all save one individual—Mr Montmorency. Surely you knew that in the Charles Surface of this evening you beheld your rejected lover, Mr Stanley?'

A film came slowly over the eyes of Miss Anstruther. 'You are not joking, Mr Vallance?'

'The matter is too serious for jesting. But I will break a confidence. He loves you. He told me so half an hour ago.'

The heiress could scarcely forbear a smile, as she reflected that her ears had drunk in the soft confession only five minutes ago. 'Mr Vallance, will you do me a favour? Will you ask Mr Stanley to step here for a few minutes? But remember, you must on no account reveal my identity.'

'You may rely upon me, Miss Anstruther. I do not know what steps you mean to adopt; but there is no time to lose, for old Colonel Stanley is in front, and will, if he has recognised you, at once inform his son.'

'That is my fear; so haste.'

Almost before the heiress could mature her plans, the rejected one appeared before her. He was very grave, and bowed with an air of deep humility, as the actress thus addressed him: 'Mr Vallance and I are old acquaintances, so I commissioned him to ask you to return for a short time. I feel very anxious about our scenes in the *Hunchback* to-morrow. Would you mind running through the *Modus* and *Helen* scenes? I mean the second one.'

Montmorency bowed. 'With pleasure.'

It would have been a lesson for half the actresses on the stage, could they have beheld the manner in which the saucy coquette of the play coaxed her lover, lured him on, fascinated him, and enveloped him in such a spell of witcheries, that no *Modus* that ever breathed could have been proof against her seductive wiles. The scene came to an unexpected termination, for Montmorency suddenly caught her in his arms, and as he held her clasped tight to his breast, exclaimed in rapid and excited tones: 'This is not acting! If it be, you are the greatest actress that ever trod the boards. You love me! I see it in your sparkling eye; I read it in your blushing cheek! Say, am I not right?'

Emily Anstruther remained perfectly passive in the arms of Harry Stanley, as she murmured 'Yes!'

The enraptured couple were so completely absorbed in reading love in each other's eyes, that they had not observed the entrance of two gentlemen, Colonel Stanley and Mr Vallance.

The old colonel was the first to speak. 'Speak, sir! Is this a scene from a play?'

By this time the heiress had left the sweet anchorage of her lover's arms, and advancing to

the old man, said: 'Do you not recognise your godchild, Emily Anstruther?'

But surprise had taken away the power of speech from the colonel.

His son interposed. 'I trust Miss Anstruther will acquit me of any guilty knowledge of this fact—will believe that I believed she was merely Miss Fonblanque the actress.'

Emily Anstruther here cast down her eyes, while a deep blush mantled over her face and neck. 'I am afraid I am not equally innocent; for Mr Vallance informed me that I had refused my hated lover. But I have enough confidence in his love for me, to hope for his belief in my unselfish love for him.'

'So you see, dad,' exclaimed the younger Stanley, 'Love not only rules the court, the camp, the grove, as the poet says, but does not disdain to flutter his wings in the green-room.'

Author's Note.—This story having been dramatised, and the provisions of the law as regards dramatic copyright having been duly complied with, any infringement of the author's rights becomes actionable.

HUMOROUS DEFINITIONS.

A SMART, pithy, or humorous definition often furnishes a happy illustration of the proverbial brevity which is the soul of wit. Wit itself has not inaptly been called 'a pleasant surprise over truth;' and wisdom, often its near ally, is, in the opinion of a clever writer, 'nothing more than educated cunning.' 'Habits are what we learn and can't forget,' says the same author, who also defines silence as 'a safe place to hide in,' and a lie as 'the very best compliment that can be paid to truth.' 'Show him an egg and instantly the air is full of feathers,' said a humorist, defining a sanguine man. 'A moral chameleon' is a terse reckoning-up of a humbug. Man's whole life has been cynically summed up in the sentence, 'Youth is a blunder; middle life, a struggle; and old age, a regret.'

Whimsical definitions are sometimes quite as neat and telling as those of a smarter kind. Dr Johnson confessed to a lady that it was pure ignorance that made him define 'pastern, the knee of a horse;' but he could hardly make the same excuse for defining pension, 'an allowance made to any one without an equivalent.' A patriot, some writer tells us, is 'one who lives for the promotion of his country's union and dies in it;' and a hero, 'he who, after warming his enemies, is toasted by his friends.'

Of juvenile definitions, 'dust is mud with the juice squeezed out;' scarcely so scientific as Palmerston's definition of dirt as 'matter in the wrong place.' A fan, we learn, is 'a thing to brush warm off with;' and a monkey, 'a small boy with a tail;' 'salt, what makes your potatoes taste bad when you don't put any on;' 'wakefulness, eyes all the time coming unbuttoned;' and 'ice, water that stayed out too late in the cold and went to sleep.'

A schoolboy asked to define the word 'sob,'

whimpered out: 'It means when a feller don't mean to cry and it bursts out itself.' Another defined a comma as 'a period with a long tail.' A youngster was asked to give his idea of the meaning of 'responsibility,' so he said: 'Well, supposing I had only two buttons on my trousers, and one came off, all the responsibility would rest on the other button.'

'Give the definition of admittance,' said a teacher to the head-boy. This went from the head to near the foot of the class, all being unable to tell the meaning of it, until it reached a little boy who had seen the circus bills posted about the village, and who exclaimed: 'Admittance means one shilling, and children half-price.'

'What is a junction, nurse?' asked a seven-year-old fairy the other day on a railway platform.—'A junction, my dear?' answered the nurse, with the air of a very superior person indeed: 'why, it's a place where two roads separate.'

To hit off a jury as 'a body of men organised to find out which side has the smartest lawyer,' is to satirise many of our 'intelligent fellow-countrymen.' The word 'suspicion' is, in the opinion of a jealous husband, 'a feeling that compels you to try to find out something which you don't wish to know.' A good definition of a 'Pharisee' is 'a tradesman who uses long prayers and short weights;' of a 'humbbug, one who agrees with everybody;' and of a 'tyrant, the other version of somebody's hero.' An American lady's idea of a ballet-girl was, 'an open muslin umbrella with two pink handles;' and a Parisian's of 'chess, a humane substitute for hard labour.' Thin soup, according to an Irish mendicant, is 'a quart of water boiled down to a pint, to make it strong.'

Of definitions of a bachelor—'an un-altar-ed man,' 'a singular being,' and 'a target for a miss,' are apt enough. A walking-stick may be described as 'the old man's strength and the young man's weakness;' and an umbrella as 'a fair and foul weather friend' who has had 'many ups and downs in the world.' A watch may be hit off as 'a second-hand affair;' spectacles as 'second-sight' or 'friendly glasses;' and a wig as 'the top of the poll,' 'picked locks,' and 'poached hare.' And any one who is troubled with an empty purse may be comforted with the reflection that 'no trial could be lighter.'

'Custom is the law of fools,' and 'politeness is half-sister to charity'—the last a better definition than that which spitefully defines polite society as 'a place where manners pass for too much, and morals for too little.' 'Fashion' has been cleverly hit off as 'an arbitrary disease which leads all geese to follow in single file the one goose that sets the style.' An idea of the amusement of dancing is not badly conveyed by the phrases 'embodied melody' and 'the poetry of motion.'

The 'Complete Angler' as a definition of 'a flirt' is particularly happy. Beauty has been called 'a short-lived tyranny,' 'a silent cheat,' and 'a delightful prejudice;' while modesty has been declared 'the delicate shadow that virtue casts.' Love has been likened to 'the sugar in a woman's teacup, and man the spoon that stirs it up;' and a 'true-lover's-knot' may not inaptly

be termed 'a dear little tie.' Kisses have variously been defined as 'a harmony in red,' 'a declaration of love by deed of mouth,' and 'lip-service.'

'Matrimony' was defined by a little girl at the head of a confirmation class in Ireland, as 'a state of torment into which souls enter to prepare them for another and better world.'

'Being,' said the examining priest, 'the answer for purgatory.'

'Put her down!' said the curate, much ashamed of his pupil—'put her down to the foot of the class!'

'Leave her alone,' quoth the priest; 'the lass may be right after all. What do you or I know about it?'

THE MONTH:

SCIENCE AND ARTS.

NEARLY seven millions sterling have been already expended upon the Panama Canal works, and according to all accounts, there is plenty to show for the money. The channel is being dredged out by enormous machines, which scoop out the softer earth and operate upon the debris of harder rocks, after the latter have been blasted. Colon, the Atlantic terminus of the canal, has, from the miserable and dirty little village which it presented some years ago, sprung into a prosperous town. The dry season has unfortunately been an unhealthy one, and there has been an epidemic of marsh-fever; but altogether we may take the general report of the Canal works as a satisfactory one. There is little doubt that the great work of uniting the Atlantic and Pacific Oceans will be accomplished within very few years.

News has been received by the Geographical Society that their intrepid explorer, Mr Joseph Thomson, whose departure some months ago on an expedition to the region east and north-east of Lake Victoria Nyanza we briefly chronicled at the time, has safely returned to Zanzibar. Little is at present known as to what he has done, further than that he has successfully carried out his programme with the most satisfactory feature that the work has been done without any loss of life except from disease. We may look forward with great interest to Mr Thomson's account of this his third successful expedition, the more so, as this time he has journeyed in a region of Africa untraversed by any previous explorer, and about which, therefore, the knowledge possessed by our best geographers is open to improvement.

From a paper recently read before the Institution of Civil Engineers, by Mr G. H. Stayton, upon the Wood-pavements of London, we glean the following interesting particulars: The metropolis comprises nearly two thousand miles of streets, of which only fifty-three miles are at present laid with wood. Most of the wood used is in the form of rectangular blocks of yellow deal, principally Swedish. Neither elm nor oak will stand changes of temperature sufficiently well to fit them for this purpose; but pitch-pine answers well, and so does larch; though the supply of the latter limits its use. Creosoting the blocks has no value as a preservative, and the wood is now used plain, the

joints being filled in with cement. The average cost of laying wood-pavement is about ten shillings and sixpence per square yard, and the expenses of maintenance compare very favourably with Macadam and other systems of pavement. 'There is nothing new under the sun,' even in the matter of wood-pavements, for we find, on reference to a *Mechanic's Magazine* dated 1858, that wood-blocks, placed grain uppermost, as in all modern systems, are distinctly advocated as having many advantages over granite roads, diminution of cost and durability being among those stated.

It has become customary to speak of the present epoch as the 'Iron Age,' in order to distinguish it from those two long periods of human interest known respectively as the Stone Age and the Bronze Age. But future historians may well be tempted to substitute the word steel for iron, for it is an undoubted fact that improved processes of manufacture, and the resulting easy and cheap production, are causing steel to be widely substituted for its parent metal. In railways, steel rails are now almost entirely replacing iron ones, and that modification of the metal known as 'mild steel' is finding great favour just now among shipbuilders. The Board of Trade have lately had representations made to them that the superiority of steel over iron for shipbuilding purposes should be officially recognised; and that this request is well grounded, the following instances will go far to prove. A steamer wrecked on the coast of the Isle of Wight remained for ten days in stormy weather perched on a ledge of rocks without breaking up. 'If,' says the engineer's Report, 'she had been built of iron instead of steel, there is not a doubt that she would have gone to pieces. The agent of another vessel wrecked at New Zealand last year reports to the owner that the vessel was eventually released from her rocky bed; but, with a large number of passengers, would have been lost, had it not been for the beautiful quality of the material of which she is built, known as mild steel.'

But there is one branch of the metal trade which shows a continually increasing activity, and which need not fear any rivalry from steel, and that is the tinplate trade. Many thousands of tons of this tinned iron—that is, thin sheets of iron coated with tin—are annually exported from this country, our best customers being the United States. We may presume that a large quantity of this metal comes back to us in the form of tins containing preserved meats, fish, and fruit. In Philadelphia, there are a number of factories for utilising these tins after they have been used. They are collected from the ash-heaps, the hotels and boarding-houses. The solder is melted and sold, to be used again; the tops and bottoms of the tins are turned into window sash-weights; the cylindrical portions are rolled out flat, and are made into covers for travelling trunks, and are used for many other purposes. The industry is said to be a very profitable one, for the expense of gathering the tins is covered by the sale of the solder, and the capital required is small. Such ingenious applications of waste materials most certainly deserve to succeed.

What is known as 'flashed glass' consists of common white glass blown with a layer of coloured glass superposed on its surface, which surface can afterwards be eaten away in parts by the application of fluoric acid, so that any ornament or lettering can be executed upon it. The same principle in an extended form has lately been applied by Messrs Webb of Stourbridge to the production of most beautiful vases in what has been aptly called cameo glass. The vase is first blown in glass of three different descriptions, fused together, forming eventually three distinct layers of material—the innermost of a semi-opaque colour, the next white, and the outside of a tint to harmonise with the first or innermost. Now comes the artist's work. The design being drawn upon the surface, the outer colour is removed so as to leave but a tint, deep or light as may be wanted in certain parts; next, the white is cut into so as to show up where required the ground colour behind. In this way the most intricate design is produced with the most artistic results. The operator employs not only fluoric acid, but makes use of the steel point, and also the ordinary emery wheel commonly used for engraving and cutting glass. Two of these vases are, as we write, on view at Mr Goode's, South Audley Street, London.

The first cable tramway laid in Europe has been opened on the steepest bit of road near London—namely, Highgate Hill, and is pronounced on all hands a complete success. It is to be hoped that the system will become as common in this country as it is in America, where not only steep gradients are thus dealt with, but level roads, such as our horse trams already traverse. The boon to horses would be immeasurable. At the present time, on British tramways more than twenty thousand horses are at work. The labour is so hard, that about one quarter of this number have annually to be replaced. This annual loss absorbs forty-three per cent. of the gross earnings, a consideration which will appeal more eloquently to the feelings of many than will the sufferings of the poor horses.

Referring to the epidemic of smallpox in London, a correspondent of the *Times* gives a valuable suggestion. He tells how an epidemic of the same dreaded disease was quickly stamped out in a South American village some years ago, and although our great metropolis bears but small resemblance to a village, the remedy in question might nevertheless be tried. Huge bonfires of old creosoted railway sleepers were made in the streets, and gas-tar was added occasionally to stimulate the flames. In the meantime, every house where a death or recovery occurred was lime-washed. With these precautions, which are manifestly applicable to other zymotic diseases, the visitation speedily vanished. Concerning this all-important subject we may have something further to say in a special paper.

Meanwhile, there is no kind of doubt that the spread of infectious disease is attributable in great measure to personal ignorance, commonly called carelessness, as well as to that entire indifference as to the welfare of others which is so common to human nature. Some time since, an advertisement appeared to the

following effect: 'Should this meet the eye of the lady who travelled (by a particular train) with her two boys, one of whom was evidently just recovering from an illness, she may be pleased to learn that three of the four young ladies who were in the carriage are very ill with the measles.' This is surpassed by a statement contained in a recent letter in the *Times*. A lady, finding that her boys, on recovering from a severe attack of scarlatina, suffered much from dandruff (the scales which separate from the scalp, and which, in fever, are a prolific source of contagion), took the sufferers to a leading West End hairdresser's, so that their heads could receive a thorough cleansing with the machine-brush!

We would in this connection draw attention to a novel system of providing for smallpox cases with the least amount of risk to others, which is established by the Metropolitan Asylums Board of London, and which will undergo in time further development. In addition to the five hospitals in different parts of London which have been opened whenever a fresh epidemic has broken out, there is a very elaborate ambulance system, by which a suitable carriage with a nurse and porter is despatched, as soon as notice is received, to the patient's place of residence and removes the patient to the nearest hospital. This has been at work for some years; but in addition there are three ships moored on the Thames opposite Purfleet, two of which are hospital ships, the third being used as a residence for the staff, and containing offices, kitchens, workshops, &c. Some four miles inland there is a convalescent camp, consisting of tents for about one thousand patients, each heated and lighted by gas, and suitably fitted for the purpose in every way.

To convey patients to the ships, an ambulance steamer runs as often as required, being fitted up as a travelling hospital, with beds, &c., and having a medical and nursing staff. Patients are removed to the river-side either direct from their homes, or from the hospitals, usually on comfortable beds, and carried on board the steamer, and thence down the river. Another steamer brings the recovered cases back; and when landed, they are conveyed in special carriages to their homes, free from infection in person and clothing.

So far the problem of how to provide for an epidemic of smallpox in London is in a fair way of being solved, by a system which, though still in its earliest stage, is daily undergoing development and improvement. When yet another steamer is fitted out, there will be no difficulty in coping with a much larger epidemic than has visited London for many years, and at the same time treating patients with an amount of attention almost unknown till now.

The proposal to revive the art of lacemaking in Ireland, to which we adverted some months ago, has now received more definite form. A scheme has been framed under the auspices of many influential persons, the chief features of which are as follows: Original designs are to be purchased under the advice of the best authorities on the subject. These designs will be sent to the lacemaking centres for execution. The specimens will then be exhibited and offered

for sale. The expenses to set this machinery at work will amount to about five hundred pounds, much of which is already subscribed. Full information as to the project can be obtained from Mr Alan Cole, of the South Kensington Museum.

Dr Von Pettenkofer has, according to the *Lancet*, been lately paying attention to the poisonous action of coal-gas on the human system, and a few notes of authenticated cases may be serviceable to those who pay little heed to an escape of gas so long as it does not in their opinion assume dangerous dimensions. The cases quoted all refer to escapes of gas into dwelling-houses after passing through a layer of earth, and we may note that such escapes are difficult of detection, for the earth robs the gas in great measure of its tell-tale odour. At Roveredo, three women were killed in their sleep by an escape from a broken pipe under the roadway thirty-five feet distant. At Cologne, three of one family were carried off by a similar escape at a distance of ninety-eight feet. At Breslau, a case is reported where the escape was no less than one hundred and fifteen feet away from its victim. It would seem that the dangerous constituent of coal-gas is carbonic oxide, which usually forms about eight per cent. of the vapour conveyed to our houses. Whether this noxious ingredient can, like other impurities, be eliminated in the process of purification at the gas-works, we do not know, but the question is certainly worth the attention of the authorities.

The Observatory on the summit of Ben Nevis, which our readers will remember was opened in October last, will be completed this summer. The observations already made confirm the anticipations as to the value of a high level station, and the completion of the structure will add to the efficiency of the work done, for hitherto the observers have been cramped for space. A shelter for tourists forms part of the scheme, and travellers will be able to obtain light refreshment there, and if they desire it, can telegraph from the highest point in Britain to their friends below. The cost of completion will absorb about eight hundred pounds; but this estimate does not include the heavy outlay for carriage of materials on horseback up the bridle-path already constructed. It has been suggested that visitors on horseback using this path should pay a toll of five shillings—a modest sum, when it is considered that the expenses of maintenance are much increased by the soil being loosened by the horse's hoofs, especially when the ground is in a soft condition.

The small Chinese colony established at the International Health Exhibition is 'one of the principal attractions of the place. Visitors have now the opportunity of tasting various strange dishes which before they had only heard of by report. The much extolled bird-nest soup can be had here, together with shark-fins, *beches de mer* (sea-slugs), edibles made of different seaweeds, shredded cucumber peels mixed with vinegar, and various other delicacies, which, we trust, are nicer than they seem to be by mere description. We may note that the South Kensington executive have already arranged for an Exhibition to follow on the present one. It is to be called the Exhibition of Inventions, and will

include all kinds of appliances, one entire division being devoted to musical instruments.

A long-felt want by paper-rulers and others has now been supplied by the new Patent Automatic Paper Feeding-machine. It has been invented by Mr William Archer, 204 Rose Street, Edinburgh—a paper-ruler who has spent his spare time during the last ten years in working it out, and who has now succeeded in patenting a Ruling-machine which is allowed to be the most accurate in use for feeding the paper in a continuous stream, or feeding to grippers at given intervals. It can be worked either by hand or steam-power, and it renders unnecessary the employment of boys or girls as paper-feeders. It can also be applied to hot rolling-machines; and it is expected that it will also be turned to use in connection with printing, &c.

OCCASIONAL NOTES.

THE NEW ORGAN IN WESTMINSTER ABBEY.

The old-new, or the new-old, organ of Westminster Abbey was formally tried on the 24th of May, at the usual afternoon service, after which a recital, which served to exhibit the extreme beauty and power of some of the new work, was given. The new organ has fifty-six speaking stops, besides many mechanical stops, couplers, &c., and is placed in two lofty blocks, like the one in St Paul's Cathedral, at the west end of the two choir screens, only that in this case the player sits between the two over the doorway of the choir. The magnificent oak case, designed by Mr Pearson, has not yet been erected, because the funds for the purpose—about fifteen hundred pounds—are not, as we write, yet collected. The principal bellows are blown by a gas-engine, and are placed in a vault below the cloisters, the pipes conveying the air being nearly one hundred feet in length. A curious arrangement exists to connect the keys with the pipes, which is done by tubes, through which, on the key being pressed, wind, under heavy pressure, is admitted, and acts instantly on a small bellows at the other end of the tube. This, on being inflated, pulls down the pallet or valve under the sound-board, and thus gives air to the pipe. This clever system is said not to get out of order or to be affected by changes of temperature.

It may be interesting to state that this organ was in the first instance built by Schreider and Jordan so far back as 1730. Exactly a hundred years after (1830) it was added to by Elliott; and again in 1848 and in 1868, Hill made many additions; and it has now been almost completely reconstructed by Messrs Hill and Son, of the same well-known firm. It may fairly be considered, with that in St Paul's Cathedral, and All Saints, Margaret Street, to take rank as one of the finest church organs in London.

THE ANTHROPOMETRICAL LABORATORY AT THE HEALTH EXHIBITION.

Without intending the smallest disrespect to our numerous readers, we will venture to say that more than one will be inclined to ask the very obvious question, 'What is anthropometry?' Well, this fine-sounding, Greek-adapted name

signifies the art of describing and recording, in a schedule provided for that purpose, the particulars appertaining to the condition, functions, powers, and capabilities of the human body and limbs. Every person visiting the Laboratory at the Health Exhibition can have his or her schedule filled up with a statement, ascertained on the spot, of his name or initials, age, sex, occupation, place of birth, colour of hair and eyes, height standing and sitting, weight, length of span of arms, strength of squeeze and of pull, swiftness and weight of direct fist-blow, capacity of chest, lungs, and breathing, as measured by a spirometer, acuteness of vision as measured by a test type, conditions of colour-sense, and acuteness of hearing. The ascertaining of these particulars, and any others of a like nature bearing immediately on the principal question, seems to be the especial business of the art of anthropometry. It may be objected that the collecting of these facts, though interesting enough to the individual practised upon and his family, can be of no possible use beyond that limit, or indeed anywhere else; but the gentleman who has originated this novel and ingenious scheme (Mr Francis Galton) proposes to keep a duplicate of the filled-up schedule which each person operated on will receive; and by this means he hopes to obtain a very large number of facts and statements, which will doubtless be ultimately arranged and tabulated, and made good use of by the originator, who may possibly submit them to the Registrar-general, or to the Statistical Society, for enrolment amongst their curious records. It is, at any rate, in spite of its somewhat alarming Greek name, an interesting experiment.

ADVICE TO INTENDING EMIGRANTS.

A correspondent in New South Wales writes to us as follows: 'Australia offers a wide field for the capitalist and the manual labourer, but I should not advise others to try their fortunes here. For educated persons, male or female, without capital, Australia is a death-trap. Such persons would, according to my observation, do far better in America, or in the English settlements in China. In China, young gentlemen possessing no other fortune than a good education, are soon employed in the warehouses and stores by the Chinese merchants, who value Englishmen whenever they can get them to take charge of the more responsible parts of their businesses. The Chinese Customs' Departments also are open to educated young Englishmen. But in Australia, brains are not a marketable commodity; strong arms are more sought for. The streets of Sydney are thronged with hundreds of educated young Englishmen, who have come out here persuaded by their friends that work is easily got, as well as money, which is not the case, except in one or two kinds of labour. I know of scores of temperate young gentlemen out here who have done all they could to find employment, and failed; and at last have had to seek relief in the Refuge. Some commit suicide out of sheer despair.

'No one, unless he can swing a pickaxe well and is possessed of plenty of muscular strength, with not too much refinement in him, should think of coming out here to earn

his bread, much less make his "pile," unless he has some capital, say a few thousands, to start a warehouse, or take up land and go in for sheep-farming. Sometimes young educated men, who bring good letters of introduction and good characters also, are given government situations, as I am thankful to say was the case with me. But I should warn any educated young man who has no friends here or capital, against coming to Australia. Even where he brings letters, he often has great trouble to get a situation, as there are so many colonials' sons hanging about doing nothing. The towns are overloaded with men, and the country is left untouched for want of capital in the majority of those who come out here.

'Servants of all classes do well here; ten shillings per week and board and lodging is the usual wage for female servants good or bad; and one pound per week with board and lodging for male servants. Governesses are an utter failure; hundreds are doing nothing here now; and when they do get employed, they don't do much better than at home; sixty pounds with board and lodging is the usual salary; but they have to act as nurses often as well, for that sum.

'My advice to young gentlemen and ladies who are thinking of giving up their situations at home and emigrating to Australia in the hopes of getting work and good salary, is—Don't.'

A CURIOUS DISEASE.

The *London Medical Record* quotes some information regarding a strange disease that is met with in Siberia, and known to the Russians by the name of 'Miryachit.' The person affected seems compelled to imitate anything he hears or sees, and an interesting account is given of a steward who was reduced to a perfect state of misery by his inability to avoid imitating everything he heard and saw. One day the captain of the steamer, running up to him, suddenly clapping his hands at the same time, accidentally slipped, and fell hard on the deck. Without having been touched, the steward instantly clapped his hands and shouted; then, in helpless imitation, he, too, fell as hard, and almost precisely in the same manner and position as the captain. This disease has been met with in Java, where it is known as 'Lata.' In the case of a female servant who had the same irresistible tendency to imitate her mistress, the latter, one day at dessert, wishing to exhibit this peculiarity, and catching the woman's eye, suddenly reached across the table, and seizing a large French plum, made pretence to swallow it whole. The woman rushed at the dish and put a plum in her mouth, and, after severe choking and semi-asphyxia, succeeded in swallowing it; but her mistress never tried the experiment again.

ANOTHER UPHILL RAILWAY.

The *Hôtel des Alpes* at Chillon, and the *Hôtel de Mont Fleury* at Montreux, Switzerland, are situated at no great distance apart; but the difference of elevation between the two is over two hundred feet, and the incline very steep. To get over this difficulty, it is intended to call

in the aid of that mighty power which has of late so prominently come to the front—electricity. After a long series of carefully conducted experiments, it has been determined that an uphill railway shall be constructed between the two hotels named, to be driven by electricity. An electric motor will be placed on a car to drive a cog-wheel; this wheel will gear into a central cogged rail, and by this means draw or pull the car up the ascent. Conductors placed beside the central rail will convey the current of the generator, which will be kept going by a five-horse-power locomotive engine. It is, however, in contemplation to drive the dynamo not by steam, but by water-power, abundance of which, descending from the hills, can be had close by, and only requires utilising. This railway will in many points resemble that up the Righi, only that electricity will be its driving-power instead of the odd-looking little engine so well known at the latter place; and when it is completed, it will certainly be a great boon to travellers frequenting these beautiful spots.

EVENING ON THE LAKE.

Upon the mountain-top the purple tints
Fade into mist; and the rich golden glow
Of the low-setting sun sinks to a gray
Subdued and tender.

Home the eagle hies,
Swift, to his eyrie, his broad pinions stretched,
Bearing him onwards, seeming motionless
The while with rapid wing he cleaves the air,
As ship the waters: now the grousecock crows
On heathered knoll his vesper lullaby
To his dear mate.

And from the silver lake,
Cradled in mountain-setting, echoing comes,
With rippling music on the air, the plash
Of dipping oars; and voices deep and low,
Mingled with women's trebles, tuneful break
The evening silence!

Grand indeed it is
To be amid these mountain solitudes;
And yet there is a sense of rest and calm,
Soothing the spirit—stealing o'er the heart
Like the soft notes of an Æolian harp,
Falling like balm upon the troubled soul,
And making the most worldly man to feel
That there is over earth a higher heaven!

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- 1st. All communications should be addressed to the 'Editor, 339 High Street, Edinburgh.'
- 2d. For its return in case of ineligibility, postage-stamps should accompany every manuscript.
- 3d. MANUSCRIPTS should bear the author's full Christian name, Surname, and Address, legibly written; and should be written on white (not blue) paper, and on one side of the leaf only.
- 4th. Offerings of Verse should invariably be accompanied by a stamped and directed envelope.

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